

REMARKS

I. Introduction

In view of the above amendments and the following remarks, reconsideration of the rejections contained in the Office Action of March 19, 2009 is respectfully requested.

By this amendment claims 12-16 have been added. Claims 1-9 and 11-16 are now pending in the application. No new matter has been added by these amendments.

II. Interview of June 26, 2009

An interview was conducted on June 26, 2009 to discuss the Office Action of March 19, 2009. In that interview, the Examiner agreed that the prior art rejection of independent claim 1 was improper; the Interview Summary of July 1, 2009 also indicates that the Office Action is improper. As such, the Office Action must be withdrawn.

More specifically, the claim 1 requires an optical information recording medium comprising, in part, a first record layer which is formed on a substrate, a first dielectric layer which is formed between the first record layer and the substrate, the first dielectric layer being mainly composed of niobium oxide, and a second dielectric layer which is formed between the first record layer and the first dielectric layer, the second dielectric layer being mainly composed of titanium oxide, wherein the second dielectric layer contacts the first dielectric layer.

The Office Action cites to figure 8 of Uno et al. (US 6,449,239), which shows a recording medium which has a substrate (100), two recording layers (104, 204), a separating layer (109), and a thermal diffusion layer (108). The Office Action asserts that the thermal diffusion layer (108) corresponds to the second dielectric layer, the separating layer (109) corresponds to the first dielectric layer, and either of the two recording layers (104, 204) correspond to the record

layer required by claim 1. However, neither of the two recording layers (104, 204) meets the positional limitations of claim 1. If recording layer (104) is taken as the first record layer required by claim 1, then the Uno et al. reference does not meet requirement “a first dielectric layer which is formed between the first record layer and the substrate.” If the recording layer (204) is taken as the first record layer required by claim 1, then the Uno et al. reference does not meet the requirement “a second dielectric layer which is formed between the first record layer and the first dielectric layer.” The Ishimaru et al. reference is relied upon for an alleged disclosure which is unrelated to the above-described deficiencies of Uno et al., and fails to cure those deficiencies. In light of the above, the prior art rejection set forth in the Office Action is improper and must be withdrawn; as is clear in the second full sentence in the Continuation Sheet of the Interview Summary, the Examiner has already agreed to as much.

Because the Office Action closing prosecution under 37 C.F.R. § 1.113 in the instant application is improper and must be withdrawn, Applicants are entitled to amend as a matter of right under 37 C.F.R. § 1.112.

III. Prior Art Rejections

Currently, claims 1-8 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Uno et al. (US 6,449,239) in view of Ishimaru et al. (US 2002/0006580) and claim 9 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Uno et al. in view of Ishimaru et al. in further view of Ishibashi et al. (JP 01-286136).

As explained above, the prior art rejection of claim 1 is improper and the Examiner has agreed to as much. Further, Applicants submit that claim 6 is allowable over Uno et al. and Ishimaru et al. for the following reasons. Claim 6 requires a method for manufacturing an optical

information recording medium comprising forming a first dielectric layer mainly composed of niobium oxide on a substrate, forming a second dielectric layer mainly composed of titanium oxide on the first dielectric layer formed so as to contact the first dielectric layer, and forming a first record layer on the second dielectric layer.

While the Office Action rejects claim 6 as being unpatentable over Uno et al. in view of Ishimaru et al., none of the limitations of claim 6 are addressed. Applicants submit that the Uno et al. reference does not disclose method steps being performed as required by claim 6. To the contrary, the disclosure of Uno et al. makes clear that the separating layer (109, asserted as the first dielectric layer) is laminated onto the thermal diffusion layer (108, asserted as the second dielectric layer). (See column 11, lines 28-45.) Thus Uno et al. does not disclose the steps of forming a first dielectric layer on a substrate, and forming a second dielectric layer on the first dielectric layer. Because Uno et al. does not disclose the steps of forming a first dielectric layer on a substrate and forming a second dielectric layer on the first dielectric layer, Uno et al. cannot meet the requirements of claim 6.

Further, with respect to both of claims 1 and 6, Applicants submit that it would not have been obvious to combine the Uno et al. and Ishimaru et al. references as suggested in the Office Action. Specifically, the Office Action states that “It would have been obvious to modify the embodiment taught by Uno et al. in figure 8 by forming the separating layer 109 of Nb₂O₅ instead of SiO₂...based on the equivalence of SiO₂ and Nb₂O₅ layers in optical recording media shown by Ishimaru et al.” The Uno et al. reference discloses that the *separating layer* (109) is provided for the purpose of optically separating the first medium (101) and the second medium (201), and “is formed of a material that enables optical absorptance...to be as low as possible.” (See column 11, lines 46-55 of Uno et al.) The Ishimaru et al. reference discloses a first dielectric

protective layer, the record layer, and a second dielectric protective layer, in that order. (See paragraph 0038 of Ishimaru et al.) The *protective layer* of Ishimaru et al. can be made out of SiO_2 , Nb_2O_5 , or any of the 29 other compounds listed in paragraph 0040 of that reference. However, while SiO_2 and Nb_2O_5 are disclosed as being interchangeable as compounds for protective layers, there is no disclosure which suggests that Nb_2O_5 would be suitable as a compound for a separating layer formed to have an optical absorptance being as low as possible. Because there is no disclosure of Nb_2O_5 being suitable as a separating layer formed to have an optical absorptance being as low as possible, a person of ordinary skill in the art would not have substituted Nb_2O_5 for the SiO_2 of the separating layer of Uno et al., as suggested in the Office Action.

As discussed in detail in the specification, Applicants have found that a dielectric layer of TiO_2 is severely affected by water and oxygen in the air, and that variations in thickness as a result of such susceptibility result in undesirable variations in the transmittance and reflectance in a TiO_2 layer. However, because Nb_2O_5 is not as severely affected by water and oxygen, applying a first dielectric layer of Nb_2O_5 allows a second dielectric layer of TiO_2 to be applied with more uniform thickness. It is thus submitted that the invention of the present application, as defined in claim 1 and 6, is not anticipated nor rendered obvious by the prior art, and yields significant advantages over the prior art. Allowance is respectfully requested.

Claims 2-5, 12, and 13 depend from claim 1 and are thus allowable for at least the reasons set forth above in support of claim 1. Claims 7-9, 11, and 14-16 depend from claim 6 and are thus allowable for at least the reasons set forth above in support of claim 6.

In view of the foregoing remarks, inasmuch as all of the outstanding issues have been addressed, Applicants respectfully submit that the present application is now in condition for

allowance, and action to such effect is earnestly solicited. Should any issues remain after consideration of the response, however, the Examiner is invited to telephone the undersigned at the Examiner's convenience.

The Commissioner is authorized to charge any deficiency or to credit any overpayment associated with this communication to Deposit Account No. 23-0975, with the EXCEPTION of deficiencies in fees for multiple dependent claims in new applications.

Respectfully submitted,

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